

Name

Key

Date

Simplifying Expressions

Combine like terms to simplify each of the following expressions.

1) $8x + 9y - 4x$
 $4x + 9y$

2) $18r + 3t - 12r + 14t$
 $6r + 17t$

3) $h + 5k + 21h$
 $22h + 5k$

4) $45 - 12r + 14r$
 $2r + 45$

5) $92w - 12r + 23w + 19r$
 $115w + 7r$

6) $34p + 12t - 12p$
 $22p + 12t$

7) $24y - 13b + 12y + b$
 $-12b + 36y$
 $36y - 12b$

8) $9p - 3p + 7y$
 $6p + 7y$

9) $12r + 8k + 9r - 4k$
 $4k + 21r$

10) $4r - 41w - 2r + 51w$
 $2r + 10w$

11) $92r - 56b + 12b - 23r + 50b$
 $6b + 69r$

12) $5x + 9x$
 $14x$

13) $24z - 3y - 14z + 9y$
 $6y + 10z$

14) $28p - 14p + 12$
 $14p + 12$

15) $30w - 20r + 2w + 11r$
 $32w - 9r$

16) $8t - 5t + 9r$
 $9r + 3t$

Use the distributive property and combine like terms to simplify.

17) $5(3x + 7)$
 $15x + 35$
 $15x + 35$

18) $9(y + 4y + 5)$
 $9y + 36y + 45$
 $45y + 45$

19) $y + 4t + 5y + 3(3t + 9y)$
 $9t + 27y$
 $33y + 13t$

20) $5(8d + 9)$
 $40d + 45$
 $40d + 45$

21) $4(b + 7b - 3b) + 9b$
 $4b + 28b - 12b + 9b$
 $29b$

22) $4t - 7r + 9r + 5(r + r)$
 $5r + 5r$
 $4t + 12r$

23) $8k + 3(k + 5)$
 $3k + 15$
 $11k + 15$

24) $12(d + 4)$
 $12d + 48$
 $12d + 48$

25) $12(b + 3b) + 11b$
 $12b + 36b$
 $59b$

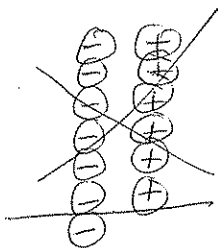
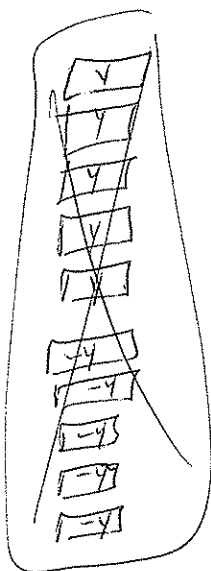
26) $8(3g - 2g - g)$
 $24g - 16g - 8g$
 0

27) $8j + 12j + 2(4 + 8j)$
 $8 + 16j$
 $36j + 8$

28) $9(4r + 4)$
 $36r + 36$
 $36r + 36$

29. Model the following expression the use only your model to simplify the expression.

$$2y - 4x^2 - 7 + 3y + x^2 + 4 - 5y + 2$$



$$-3x^2 - 1$$

30. Evaluate the following expression when $a = 13$ and $y = 6$.

$$a^2 - 10 \div 5 - y$$

$$13^2 - 10 \div 5 - 6$$

$$169 - 2 - 6$$

$$161$$